

20 December 1978

MEMORANDUM FOR THE RECORD

SUBJECT:

2. The purpose of this memorandum is to summarize that discussion.

a. opened the meeting by explaining how he has been using the findings of the recent report on "S&TI Support to Developers of Military Tactics and Doctrine" within the Army to tie S&TI production activities to the potential users of the resulting products. Bill also provided a status report on the and indicated that the final report on the S&TI evaluation process should be available by early January 1979. Finally, Bill argued for extending the existing contract to investigate S&TI relationships with the testers and evaluators of weapons systems, threat writers and national-level consumers of S&TI products.

b. noted that 45 percent of the production budget is devoted to the production of S&TI; PAO should not endorse the idea that CIA S&TI production activities should be more responsive to DoD requirements for S&TI support; the IC Staff is in no position to recommend how DoD should go about solving the problems highlighted in the latest report; there is concern about how much more analytical effort can be profitably invested in trying to understand S&TI production activities. Bill also indicated that S&TI production generally produces only intermediary goods--and not products which are of general interest at the policymaking level of the government. Finally, Bill noted that much of the S&TI production is devoted to producing reports which are read only by intelligence personnel--and not by consumers outside of the "intelligence family."

c. made the following observations: the report on support to developers of military tactics and doctrine makes a number of broad assertions which are not generally true of all S&TI users within DoD; the study team focused too much attention on the non-availability of and/or lack of familiarity with the CAST and not

SUBJECT: Presearch S&TI Reports

enough attention on the informal mechanisms which exist to surface intelligence requirements and satisfy consumer needs; PAO will review the latest report and let [] know when it can be released; Al also told Bill that anything he wants to do with respect to possible follow-on efforts should not be premised on any contractual support from PAO; PAO is not prepared to extend the existing contract at this time, primarily because several projects, which require contractor support, have a much higher priority within PAO.

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3. The discussion reached these conclusions:

a. [] complete its report on the S&TI evaluation process by early January.

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b. PAO will review [] reports and make a determination of when and how they can be distributed.

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c. PAO will let [] know if any follow-on requirements develop with respect to his recommendations of 27 October 1978.

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d. [] will not submit an unsolicited proposal to do any follow-on work unless PAO so advises []

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4. After the meeting, [] provided the undersigned with a copy of the first portion of the final report on the evaluation process. See attachment.

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Attachment:
Systematic Evaluation of Intelligence
for Product Improvement and Program
Justification dtd December 22, 1978

cc:



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TAB

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SYSTEMATIC EVALUATION OF INTELLIGENCE FOR PRODUCT
IMPROVEMENT AND PROGRAM JUSTIFICATION

December 22, 1978

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Nov 19 Dec 78

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SYSTEMATIC EVALUATION OF INTELLIGENCE FOR PRODUCT
IMPROVEMENT AND PROGRAM JUSTIFICATION

22 December 1978

Prepared by
The Intelligence Community Staff

for
The Director of Central Intelligence

Authors

Intelligence Community Staff

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ABSTRACT

(U) This report summarizes results of a study of two problems faced by the intelligence community: (1) lack of meaningful feedback from users on levels of satisfaction so as to cause product improvement and (2) nonexistence of qualitative or quantitative data justifying intelligence programs for use in making budget decisions. It builds on previous work which identified problems in S&TI support to R&D and devised an improved system for providing that support. The study demonstrates wider applicability of the support system and shows that the component for evaluation of intelligence products could be used to develop data for decisionmaking by intelligence managers, particularly in the product improvement, source assessment, and budget processes.

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I. PREFACE

BACKGROUND

1.1 (U) This is the fourth technical report of a research effort that was undertaken to improve utilization of scientific and technical intelligence (S&TI) by the R&D community. Problems uncovered and solutions developed have been shown to have utility beyond the original narrow focus of S&TI in support of R&D. Since this report, dealing with systematic evaluation as a basic means for intelligence product improvement and program justification, logically follows and is based on the three previous reports, they are described in the following summary paragraphs.

1.2 (U) The initial product of this effort was a comprehensive IC Staff report in October 1977 entitled "Intelligence Community Support to Research and Development (U)." That report described community deficiencies in S&TI support to R&D, identified problem areas, and gave recommendations for improvement.

1.3 (U) The first study report showed there is very poor linkage between S&T production agencies and the large, widely-dispersed body of DoD R&D managers. As a result, producers of S&TI have only vague, imprecise, largely intuitive knowledge of the identity and needs of a key customer group. Tasking of S&TI producers is neither comprehensive nor systematic. Defective communication between producer and user also means that

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often the user does not receive the intelligence he needs and, conversely, often gets irrelevant or unresponsive products.

1.4 (U) The initial study report also outlined an uncomplicated system to close the gap between S&TI producer and R&D user. The system is applicable to all community members within existing organizations and command lines. Among the study recommendations was that the support system be adopted community-wide. All findings and recommendations of the report were briefed extensively to upper level management in the intelligence community during late 1977 and early 1978.

1.5 (U) The initial report pointed out that the disconnect between producer and user is a costly failure within the individual military services. The difficulties are magnified when potential users are in a service different from a producer. The poorest linkage is that between the CIA as a producer of S&TI and users in the DoD R&D community. As a result a second study addressed this problem and provided recommendations for solution. That study, entitled "The Utility and Accessibility of CIA S&TI Products in Support of DoD Materiel Acquisition (U)" was completed in July 1978. Following a review of the study report, CIA has acted on certain of the recommendations which were within its purview. Other recommendations are being staffed.

1.6 (U) A third report entitled "Intelligence Community Support to Developers of Tactics and Doctrine (U)," completed in October 1978, demonstrated, among other things, that the system developed for S&TI support to R&D could be used to support managers of programs to develop tactics and doctrine. It also showed that the system could be used to ensure that the intelligence needs of any group of users could be met comprehensively and economically by producers of any form of intelligence.

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PROBLEMS ADDRESSED BY STUDY

1.7 (U) There are two principal problems addressed in this technical report:

- a. The intelligence community does not have a system to provide meaningful feedback from users regarding levels of satisfaction, so as to cause product improvement. Whatever evaluation takes place is done by producers in the absence of rational and systematic inputs from customers.
- b. Intelligence community budget decisions are made without qualitative and quantitative management information on program justification. Congressional staffs and the Defense Audit Service are increasingly aware and critical of the traditional practice of preparing intelligence programs without documentable justification based on needs of users. Both know that wastage exists, since lack of input by users--including evaluations--must result in production by intuition.

OBJECTIVES

1.8 (U) The purposes of the study effort described in this technical report were to:

- a. Describe existing practices in the intelligence community for evaluating intelligence products.

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- b. Identify problem areas in the product evaluation process.
- c. Devise practical solutions to identified evaluation problems that would assist in intelligence product improvement and budget justification.
- d. Determine if solutions to product evaluation problems were applicable to other areas such as assessment of collection systems or sources.

APPROACH

1.9 (U) During the course of interviews for the three previous technical reports described in paragraphs 1.2-1.6, observations and data were gathered concerning intelligence product evaluation. As a result of briefing the October 1977 report at the decisionmaking level in OSD, DIA, CIA, and ICS, oral and written comments were received.

1.10 (U) The study team selectively interviewed at the local and intermediate management levels as well as at the Washington headquarters level in order to develop useful data. Team members placed emphasis on the needs of users and problems of supporting them at the local level. Interviewers encouraged suggestions relating to preparation of documentation, ease or difficulty in use of evaluation arrangements, and desirable features for a community-wide evaluation system.

1.11 (U) Analysis in this study effort was aimed at devising an evaluation system for intelligence products which would have uniform utility for product improvement throughout the intelligence community. The approach taken was that the evaluation

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system should be so uncomplicated and direct that it could be applied universally. Such an evaluation system could be extended down to the level of collection systems and even sources and would provide the basis for rational justification of budgets at all levels.

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II. SYSTEMATIC EVALUATION OF INTELLIGENCE PRODUCTS

NEED FOR EVALUATION SYSTEM

2.1 (U) A community-wide, systematic evaluation process is needed to develop information for managers of intelligence production. An evaluation process will provide the basis for answering the following questions.

- Did the product answer the stated requirements of users?
- Is there a continuing need for the product?
- Should the scope of the product be narrowed, expanded, or remain the same?

If the production manager has the answers to these questions he can make the near and long-term decisions inherent to management control.

2.2 (U) Production managers need information derived from an evaluation system in order to improve products on a rational basis. Concomitantly, the information is needed to provide documented substantiation for programs of intelligence. Systematic evaluations from users to producers are vital for a necessary producer-user dialogue.

2.3 (U) No form of intelligence achieves consequence until placed in the hands of a user who needs it to perform a mission. As a corollary, the significance of intelligence can be determined only by the user.

2.4 (U) For any form of intelligence, the user is the technical expert in the field in which he is supported. His views and insights on finished intelligence often can lead to improvements and to correction of errors. Careful consideration

(by producers) of the expert opinion of the technically-qualified user prior to iterations of the intelligence cycle will result in responsive products with near-optimum expenditure of resources.

2.5 (U) It follows that without rational evaluation procedures that are understood and used throughout the intelligence community, producers cannot achieve their full potential. Moreover, in the absence of well-defined evaluation steps, the system to a large extent will drive itself and the intelligence community will be perceived as unresponsive to its customers.

EXISTING ARRANGEMENTS

2.6 (U) There is now no community-wide system of evaluation of intelligence products, nor does any of the services have a department-wide system. Within DoD basic guidance for users is contained in DIA's "The Intelligence User's Guide (U)", DDM-2600-397-78 of January 1978, but no reference is made to evaluations.

2.7 (U) The lack of systematic arrangements in DoD is well illustrated by two quotes from the DIA publication "Scientific and Technical Intelligence Production (U)", DIAM 75-1 of 21 September 1977. On page 4 is the statement:

"The S&T intelligence cycle is completed when the consumer receives and evaluates the finished product in light of his particular needs. If it fails to satisfy his needs, it is incumbent upon the consumer to provide feedback to the S&T production manager and, if appropriate, to submit additions, changes, or deletions to the standing S&T intelligence requirements in his area of interest."

"Periodic consumer evaluations of DoD S&T intelligence products are authorized and encouraged as a means of insuring consumer satisfaction. The Military Departments or designated subordinated elements are assigned the responsibility of designing and conducting surveys and analyzing results. Summaries of the results of each survey are to be provided to the DIA and the individual responses made available to the DIA task monitor for review."

In the fifteen months since promulgation of DIA on 75-1, no results are evident from the foregoing assignment of responsibility for evaluations of S&T products from DIA to the individual services. There is no rational system to ensure evaluation of S&TI or any other form of intelligence.

2.9 (U) To complete the discussion of existing arrangements for evaluation some mention must be made of tearout sheets. These are questionnaires disseminated with intelligence products that are meant to be filled in by consumers and then returned to the producer. Now seldom used, tearout sheets are a temptingly simple approach to evaluation. Therefore a discussion of them, based on interviews, is informative.

2.10 (U) The principal objection to the tearout sheet approach is that it is uncontrolled. One copy of an intelligence publication can go to many users, but there is no control to ensure that the most qualified or most important recipient makes the evaluation. Since the tearout sheets are often executed by unqualified personnel with no strong interest in improving the publication involved, data deriving from the sheets have low validity.

2.11 (U) In short, production and budgetary decisions should not be based on information coming from tearout sheets.

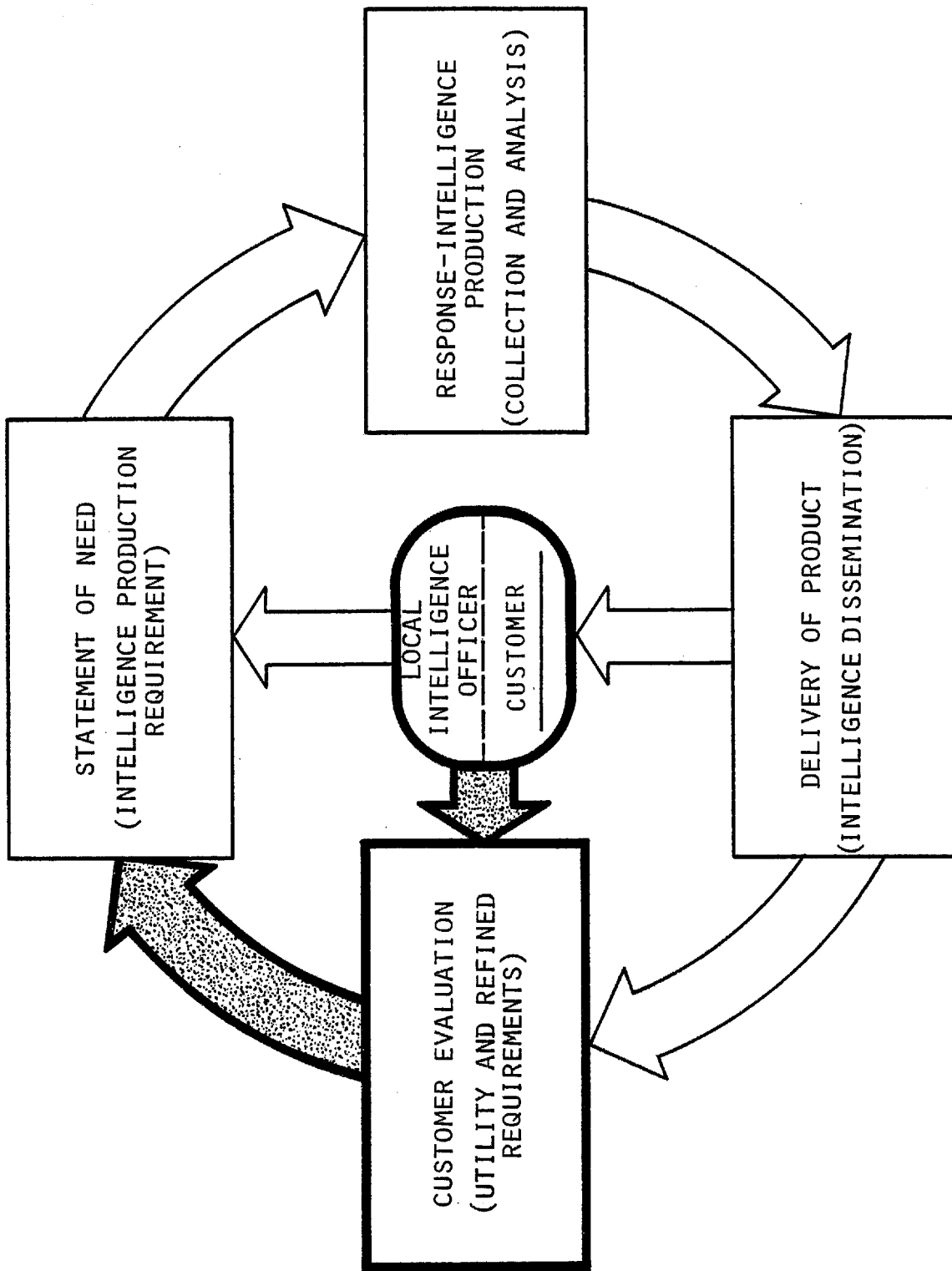
Based on the uncontrolled, episodic nature of this evaluation technique, it is a finding of this study that the use of tear-out sheets is at best useless and a waste of resources. At worse tearout sheets are misleading and can be harmful.

ESSENTIAL FEATURES OF EVALUATION SYSTEM

2.12 (U) Figure 2.1, a basic model of the intelligence cycle developed for an earlier report uses heavy lines and shading to set out the evaluation phase. It is adapted and shown here both to illustrate and emphasize two points that are fundamental to the discussion that follows: (a) the intelligence process must involve the user and (b) the intelligence process is an iterative cycle in which all phases, including evaluation, are interdependent.

2.13 (U) Referring to Figure 2.1, the customer is shown in the central oval. It is the customers for whom the whole process exists. Working closely with the local intelligence officer, the consumer should initiate the cycle by stating his needs. A finding of the study team based on interviews at several levels of management in the intelligence community is that users (managers of R&D and other programs) generally do not do a good job of advising intelligence support personnel about the current and anticipated status of supported programs. As a result, the intelligence community does an inadequate job of supporting expensive, important efforts. A system to correct this problem has been described in detail in the three previous reports of this study series. These reports are summarized in paragraphs 1.2-1.6 in the Preface of this report.

2.14 (U) The support system described in the earlier reports is designed to meet the intelligence needs of explicitly identified users who must complete the cycle by evaluating selected



(U) FIGURE 2.1
EVALUATION PHASE OF THE INTELLIGENCE CYCLE (U)

portions of those few products of vital interest to them. It is a finding of this study that selective evaluation, rationally organized is essential for an easily managed support system.

2.15 (U) As shown in Figure 2.1, an evaluation, in effect, is a requirement that initiates another iteration of the intelligence cycle. The discussion that follows makes the intelligence cycle more explicit, particularly the evaluation phase. It stresses the importance of systematic customer evaluation in causing the cycle to function efficiently by providing management with the information needed for rational decisions regarding product improvement and program justification.

ESSENTIAL FEATURES OF EVALUATION SYSTEM

2.16 (U) Table 2.1, Essential Steps for System of Product Evaluation (U), shows the actions required for systematic evaluation and the activities involved. It must be stressed at the outset that this is neither a complex nor a demanding process. If followed, it calls for the management entities shown to carry out inherent responsibilities in a logical, consistent way. Moreover, since the process is highly selective, involving a given user only with discrete portions of highly relevant publications, it requires little effort relative to the benefits at all levels.

2.17 (U) If provision were made to perform all of these steps in a systematic manner community wide, the Director of Central Intelligence could be assured of two important results:

- That the NFIB budget was being spent to support valid needs of bona fide users
- That documented justification was routinely developed for intelligence programs.

(U) TABLE 2.1
 ESSENTIAL STEPS FOR SYSTEM OF INTELLIGENCE
 PRODUCT EVALUATION (U)

Step	Responsibility
1. <u>Define</u> user programs to be supported	Intelligence User
2. <u>Correlate</u> user program with program of intelligence production tasking	Local intelligence officer/user
3. <u>Identify</u> key intelligence production tasks from user viewpoint	User/local intelligence officer
4. <u>Isolate</u> intelligence gaps	User/local intelligence officer
5. <u>Submit</u> production requirements	Local intelligence officer
6. <u>Synthesize and validate</u> production requirements	Service management control
7. <u>Program and catalog</u> tasking for discrete products	DIA/CIA
8. <u>Produce</u> publications (arrange for collection, processing, analysis)	Service production agencies/CIA/DIA
9. <u>Disseminate</u> publications	DIA/service production agencies
10. <u>Evaluate</u> discrete portions of selected publications	User/local intelligence officer
11. <u>Synthesize</u> evaluations	Service management control
12. <u>Forward</u> evaluations to DIA and production agency	Service management control
13. <u>Submit</u> new production requirements (restart cycle)	Local intelligence officer/user
14. <u>Update</u> intelligence production tasking	DIA

The two foregoing processes do not take place now. And nowhere are the necessary steps leading to them more ignored than in the phase of evaluation.

2.18 (U) A brief explanation follows of each of the steps shown in Table 2.1. The steps provide a model of the intelligence process, stressing the evaluation phase. Like any model, the steps comprise an abstraction and assist in understanding a seemingly complex, yet straightforward real-world process. For ease of reference, Figure 2.2, "Evaluation Process For Intelligence Products," has been placed at the end of this section as a foldout. The reader may wish to refer to it while reading paragraphs 2.19-2.32.

2.19 (U) Step 1-Define User Programs. Previous studies for the IC staff have shown that those programs which should receive intelligence support are documented because they have gone through an approval-funding process. The initial step in the intelligence cycle is for the user, that is the manager of an approved, funded effort to state his needs. He should be assisted by a local intelligence officer, but only the user can say what he needs and does not need. At present, Step 1 is not taken on a community-wide basis.

2.20 (U) Step 2-Correlate User Program with Program of Intelligence Tasking. This is the responsibility of the local intelligence officer who supports the manager of funded efforts. Previous study reports point out that there are organizations of local intelligence officers related to all major programs such as R&D, Tactics and Doctrine Development, and the like. At present, however, only the Scientific and Technical Intelligence program is adequately documented. It is a recommendation of this study that tasking for all intelligence programs be documented (see Step 7) in the manner of the Catalog of Approved Scientific and

Technical Intelligence Tasks (CAST). If this were done, Step 2 could be easily taken at the local intelligence level for all forms of intelligence, not just S&TI. The correlation of the user program with intelligence production tasking provides management with a range of information and leads logically to Steps 3 and 4. It also is essential for Step 9.

2.21 (U) Step 3-Identify Key Intelligence Production Tasks From User Viewpoint. As a result of correlating, the user, assisted by the local intelligence officer, specifies those portions of planned production (tasking) which are vital to his program. In so doing, in a rational system, he assumes an obligation for evaluating those portions delimited. By using this highly selective approach, the evaluation process can be kept easily manageable. The output of Step 3 is an input to Step 10.

2.22 (U) Step 4-Isolate Intelligence Gaps. From correlation of the user and intelligence programs (Step 2) it is possible to isolate intelligence gaps. If the intelligence production tasking will not result in products to satisfy all the needs of a given user, the gaps must be made explicit by the user with help from the supporting intelligence officer. The results of this lead to Step 5.

2.23 (U) Step 5-Submit Production Requirements. The sequel to Step 4 is the preparation and submission of intelligence requirements. This is the responsibility of the supporting intelligence professional. Step 5 impacts not only on Step 6, but is a key input into Step 10, preplanned selective evaluation. As was the case with Step 3, the submission of an Intelligence Production Requirement (IPR) should call for an evaluation of the resultant product.

2.24 (U) Step 6-Synthesize and Validate Production Requirements. This obviously needed step should be performed at two levels—at the management level for the supporting intelligence officers and at the service or departmental management level. Using S&TI support to R&D as an example, since it has been studied previously, IPRs would go to DARCOM for Army, NAVMAT for Navy, and SYSCOM for Air Force. Following consolidation they would go to succeeding echelons respectively ACS(I), COMNAVINTCOM, and AF/IN. As shown in Figure 2.2, Step 6 leads logically into Step 7.

2.25 (U) Step 7-Program and Catalog Tasking for Discrete Products. For DoD this is the responsibility of DIA. It was the finding of an earlier study that CIA should also provide a catalog of its intelligence production tasking. Figure 2.2 shows that Step 7 is critical for the entire intelligence cycle, including evaluation for it is a necessary condition for Step 2 and Step 8.

2.26 (U) Step 8-Produce Publications (arrange for collection, processing, analysis). This is self-evident and the logical result of Step 7. It is the responsibility of the service production agencies, CIA, and DIA.

2.27 (U) Step 9-Disseminate Publications. This is a separate, important function that will be done imperfectly in the absence of information developed in Step 2. If the customer and the supporting intelligence officer have properly correlated the user and intelligence programs the right publications will get to the user for evaluation. Past studies have shown that dissemination is not done well community-wide for DIA or CIA publications, yet it is critical for the evaluation process.

2.28 (U) Step 10-Evaluate Discrete Portions of Selected Publications. It is at this phase that the customer can and should have a critical impact on the entire intelligence cycle. By giving his reasoned views concerning responsiveness of intelligence products, the user-reviewer sets the stage for refined requirements and production response. Note that a planned, nontaxing evaluation process requires three antecedents—accurately disseminated products (Step 9); previously identified intelligence tasks that the user considers vital (Step 3); and IPRs that the user has initiated (Step 5). Because of data from Step 2, the evaluation workload at a given location can be easily anticipated. The supporting intelligence officer should write the evaluation based on customer views and send it to the superior echelon which is responsible for management control of support. Note Figure 2.2 shows only the major steps in the long-term, steady state functioning of the evaluation process within the intelligence cycle. Not shown is an extremely important near-term step—arranging for rapid response for easily-filled gaps discovered during evaluation, or any other time. Long-term, considered responses are important, but the shorter-term answers help create the environment of intelligence responsiveness so important to a healthy relationship between users and the intelligence community.

2.29 (U) Step 11-Synthesize Evaluations. At the management echelon above that of local intelligence officers, evaluations should be collated, redundancies eliminated and a command position established. Review of evaluations at the management control level permits an overview of production, leading to actions as important as recommending cancellation of a given product.

2.30 (U) Step 12-Forward Evaluations to DIA and Production Agency. As a result of Step 11, evaluations should be forwarded

via the command chain to DIA. There is no provision for community-wide evaluation of CIA, DIA, or service production agency products. A system to do this is feasible. Step 12 is necessary for an orderly update of tasking.

2.31 (U) Step 13-Submit New Production Requirements. The processes of Steps 10 and 11 will disclose intelligence gaps requiring long-term action. As a result, users working in concert with local intelligence officers should initiate new requirements. As noted in paragraph 2.28, shorter-term needs are met without resort to IPRs.

2.32 (U) Step 14-Update Intelligence Tasking. The input from Steps 13 and 14 are critical for making the intelligence process responsive to bona fide user needs. Moreover, the data regarding current customer requirements would provide justification for intelligence programs. This documentable justification is at present so incomplete as to be inadequate.

SUMMARY AND ANTICIPATED RESULTS

2.33 (U) Product improvement and program justification throughout the intelligence community are not possible in the absence of a rational evaluation system. An evaluation system for general use is easily feasible and would have the following major attributes:

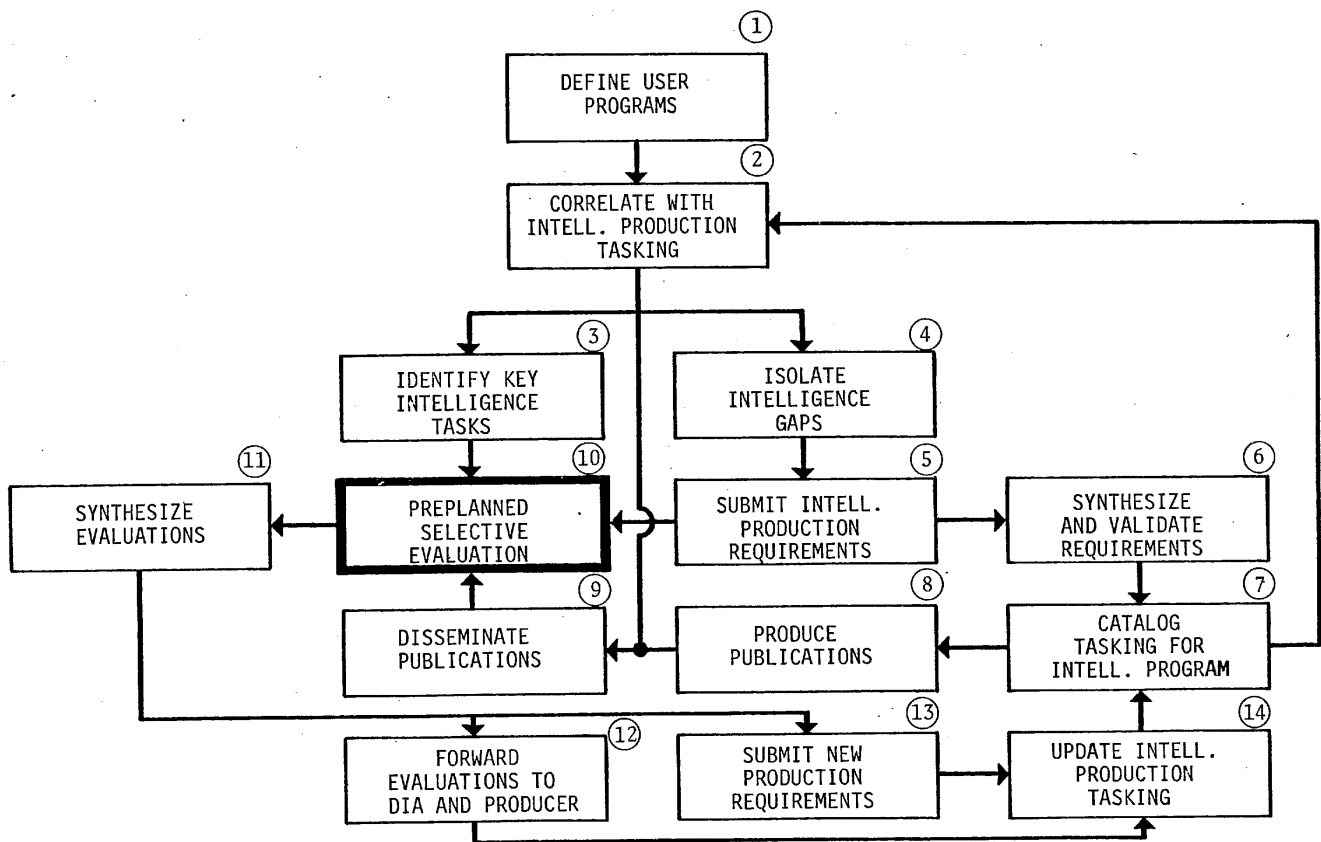
- Economy. The procedures for review should not be onerous. They should give a high return in improved products for a small investment in time from the user and intelligence communities. The key to this is judicious differentiation between vital and generally useful intelligence—from the users' viewpoint.

Solution

- Simple community-wide evaluation system
- Model exists--see Table 2.1 and Figure 2.2
- Organization exists
- Documentation exists for supported efforts, but some additional intelligence tasking needed.

Recommendations

- Establish evaluation system for purposes of product improvement and program justification
- Use product evaluation techniques to assess collection systems and sources.



(U) FIGURE 2.2
EVALUATION PROCESS FOR INTELLIGENCE PRODUCTS

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